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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------------------|-----------------------------|
| 10/564,780 | 01/17/2006 | Tomoko Morita | 108420-00054 | 3647 |
| 4372 | 7590 | 02/17/2009 | | |
| ARENT FOX LLP 1050 CONNECTICUT AVENUE, N.W. SUITE 400 WASHINGTON, DC 20036 | | | EXAMINER YOUNG, NATASHA E | |
| | | | ART UNIT 1797 | PAPER NUMBER |
| | | | NOTIFICATION DATE 02/17/2009 | DELIVERY MODE ELECTRONIC |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DCIPDocket@arentfox.com
IPMatters@arentfox.com
Patent_Mail@arentfox.com

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/564,780 | Applicant(s) MORITA ET AL. | |
| | Examiner NATASHA YOUNG | Art Unit 1797 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/11/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Terminal Disclaimer

The terminal disclaimer filed on December 11, 2008 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent 7,162,863 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

Art Unit: 1797

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kinugasa et al (US 5,783,160) in view of Dalla Betta et al (US 2003/0101713 A1).

Regarding claims 1-2 and 5, Kinugasa et al discloses an exhaust gas purifying apparatus for an internal combustion engine having: NOx removing means (8) provided in an exhaust system of said engine, for adsorbing NOx in exhaust gases from said engine when exhaust gases are in an oxidizing state, wherein ammonia is generated when the NOx removing means reduces the adsorbed NOx and the generated ammonia is retained when the exhaust gases are in a reducing state; reforming means (3) provided upstream of said NOx removing means, for reforming reducing components in the exhaust gases to hydrogen when the exhaust gases are in the reducing state; wherein said reforming means is a reforming catalyst; and wherein said reforming means is a three-way catalyst (see Abstract; column 14, lines 1-20; column 17, line 19 through column 18, line 63; and figures 2 and 7), since the three-way reducing and oxidizing catalyst (3) is made of metals such as platinum, palladium, and rhodium, which are known to be reforming catalysts in Dalla Betta et al (see paragraph 0073).

Kinugasa et al does not disclose fuel adding means for adding fuel to the exhaust gases which flow into said reforming means.

Dalla Betta et al disclose a fuel processor (200) comprising a catalyst (308) which may comprise several catalysts in series where the second catalyst can be a reforming catalyst and fuel adding means (208) for adding fuel to the exhaust gases which flow into said reforming means (see paragraphs (see paragraph 0040 and 0049 and figures 2-3).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the teachings of Kinugasa et al with the teachings of Dalla Betta et al such that fuel adding means for adding fuel to the exhaust gases are included which flow into said reforming means in order to react all of the excess oxygen present in the exhaust stream and to generate the required amount of reducing gas mixture (CO and H₂) at the operating temperature of the NSR system (see Dalla Betta et al paragraph 0052).

Regarding claim 3-4, Kinugasa et al discloses an exhaust gas purifying apparatus wherein said reforming means is a partial oxidation catalyst and wherein said reforming means contains at least rhodium, since the three-way reducing and oxidizing catalyst (3) is made of metals such as platinum, palladium, and rhodium (see column 14, lines 1-20).

Response to Arguments

Applicant's arguments with respect to claims 1-5 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments, see Remarks, page 3, filed December 11, 2008, with respect to the double patenting rejection of claims 1-5 have been fully considered and are persuasive. The double patenting rejection of claims 1-5 has been withdrawn.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 1797

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NATASHA YOUNG whose telephone number is 571-270-3163. The examiner can normally be reached on Mon-Thurs 7:30 am-6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on 571-272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/N. Y./

Examiner, Art Unit 1797

/Walter D. Griffin/

Supervisory Patent Examiner, Art Unit 1797